

**ABSTRACT**

A novel thermoelectric cooler array and method of making the same are disclosed. The thermoelectric cooler array is a multistage thermoelectric cooler which provides a cascaded configuration for providing heat transfer from a cold sink to a heat sink. The multistage

5 configuration provides for much higher heat transfer range and further provides benefit of thermoelectric cooling integrated with active electronic or optoelectronic components. The method of manufacturing the thermoelectric cooling array provides for n-type and p-type thermoelectric material substrates to be selectively bonded and sliced to create the desired stages of the multistage thermoelectric cooler.